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Design & Consulting

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TO: Ms. Stephanie Wojtowicz
New York State Department of State
Division of Coastal Resources
One Commerce Plaza, 99 Washington Ave.
Albany NY 12231-0001

Mr. George Stafford
Deputy Secretary for Coastal Resources
New York State Department of State
One Commerce Plaza, 99 Washington Ave.
Albany NY 12231-0001

RE: ***Wildlife and plant species in Hudson's South Bay and its environs:***
Public comment on the designation of South Bay Creek and Marsh as
a Significant Coastal Fish and Wildlife Habitat

Dear Deputy Secretary Stafford and Ms. Wojtowicz:

Thank you for the opportunity to comment on the above designation, which I support overall.

I am writing as a Hudson business person and full-time Columbia County resident with a long-term interest and stake in the well-being and productivity of the Hudson Waterfront area. In the past dozen years, I've served as the Commissioner of Grants for the City of Hudson, a member of its Comprehensive Plan Steering Committee, as well on its Waterfront Advisory Steering Committee. In 1999, I co-founded the group Friends of Hudson, and currently serve as co-director of The Valley Alliance, a citizens group which is intensely interested in the health and potential of the South Bay area.

My comments here are confined to providing specific information about the presence of rare, threatened, endangered, and other wildlife and plant species of special concern in the habitat of the South Bay and its environs. The current draft states that there are no such resources in the area, which plainly is an oversight. The narratives, assessments and scores contained in the draft need revision to accurately reflect local conditions.

Additional comments regarding the human uses and other key considerations of the proposed designation may be submitted separately. If you have any questions about (or wish to inspect the full source material for) the following comments, please do not hesitate to ask.

Sincerely,

SAMUEL S. PRATT
Taghkanic & Hudson

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SUMMARY & SOURCES

The Ecosystem Rarity (ER) assessment and score (25) as well as the Species Vulnerability (SV) assessment and score (0) indicated in the draft proposal for the designation of the South Bay Creek and Marsh as a Significant Coastal Fish and Wildlife Habitat are incorrect, and need revision to reflect known conditions and species in the area.

The narratives concerning *Location and Description of Habitat, Fish and Wildlife Values, Impact Assessment*, and the *Habitat Impairment Test* likewise need revision to reflect the following information and evidence. While the draft correctly indicates the Replaceability (R) value as “irreplaceable,” the raw (R) score (1.2) may require updating in light of the following.

Publicly-available and verifiable documents clearly demonstrate that a number of endangered, threatened or special concern species reside in or rely upon the area. The following analysis relies primarily on the documents listed below, which can either be accessed online, are appended to these comments, or otherwise are available upon request if too large to attach:

- **New York Rare Plant Status Lists** updated in June 2010 by the New York Natural Heritage Program, which is a partnership between the New York State Department of Environmental Conservation (DEC) and The Nature Conservancy.
 - ▶ *Reference:* [HTTP://WWW.DEC.NY.GOV/ANIMALS/29396.HTML](http://www.dec.ny.gov/animals/29396.html)
- **List of Endangered, Threatened and Special Concern Fish & Wildlife Species** of New York State, maintained by the NYS DEC.
 - ▶ *Reference:* [HTTP://WWW.DEC.NY.GOV/ANIMALS/7494.HTML](http://www.dec.ny.gov/animals/7494.html)
- **Draft Environmental Impact Statement (DEIS)** for the St. Lawrence Cement Greenport Project, filed on April 27TH, 2001 with the NYS DEC, particularly Chapter 12.0 (“Terrestrial Ecology”) and Appendix D (“Terrestrial and Wildlife Resources”). *Important note:* St. Lawrence Cement was at the time a subsidiary of Holcim US but is now wholly subsumed into Holcim, which is named in the current proposed designation.
 - ▶ *Reference:* ON FILE WITH NYS DEC OR AVAILABLE UPON REQUEST; APPENDIX ATTACHED
- **Rulings of DEC Administrative Law Judges (ALJs)** Helene G. Goldberger and Maria Villa of December 7TH, 2002, *In the Matter of the Application of St. Lawrence Cement Co. LLC for permits to construct and operate a cement manufacturing facility in the Town of Greenport and City of Hudson, County of Columbia.*
 - ▶ *Reference:* ON FILE WITH NYS DEC, OR AVAILABLE UPON REQUEST
- **Issues Conference Transcript** of proceedings before ALJs Goldberger and Villa, July 2001. This contains pertinent testimony from several staffers and experts from NYS DEC, Dr. Erik Kiviat of Hudsonia, *et al.*
 - ▶ *Reference:* ON FILE WITH NYS DEC, OR AVAILABLE UPON REQUEST

I. CORRELATION OF STATE LISTS & HOLCIM INVENTORY

A useful comparison can be made of New York State’s official lists of rare, threatened, endangered and other plant, fish and wildlife species of special concern with the inventory of “Terrestrial and Wildlife Resources” identified in April 2001 by St. Lawrence Cement (now Holcim) on its property in filings with the DEC—whose staff approved that DEIS for release for public comment. References for the following comparisons of these sources appear on Page 2 of these comments.

The following species which are listed by the State as endangered, threatened or of other special concern are identified in *both* the State lists and the SLC/Holcim inventory. As such, these species need to be incorporated into the draft proposal’s narratives and scoring.

(*Note:* For approximately half of the plant species listed below, variations or changes in plant naming complicate the task of correlating these inventories. It is requested that a State expert review each such instance to verify whether these overlap, or otherwise are distinct species. No such ambiguity exists with the wildlife listings below.)



While it cannot be assumed that the 2001 SLC/Holcim inventory was complete—indeed, it was challenged as incomplete by several experts and intervening parties in the SLC Greenport Project review—the company’s clear acknowledgement of the presence of these flora and fauna on its property is at minimum adequate to establish the presence of these species, without ruling out the presence of others:

- A. **Pied-billed Grebe (*podilymbus podiceps*)** is listed by NYS DEC as a Threatened wildlife species. It is also found in the 2001 SLC/Holcim inventory.
- B. **Osprey (*Pandion haliaetus*)** is listed by NYS DEC as a wildlife species of Special Concern. It is also found in the 2001 SLC/Holcim inventory.
- C. **Common Nighthawk (*chordeiles minor*)** is listed by NYS DEC as a wildlife species of Special Concern. It is also found in the 2001 SLC/Holcim inventory.
- D. **Yellow-breasted Chat (*icteria virens*)** is listed by NYS DEC as a wildlife species of Special Concern. It is also found in the 2001 SLC/Holcim inventory.
- E. **Red-shouldered Hawk (*Buteo lineatus*)** is listed by NYS DEC as a wildlife species of Special Concern. It is also found in the 2001 SLC/Holcim inventory.
- F. **Hyssop Skullcap (*Scutellaria integrifolia*)** is listed by NYS DEC as a category S1 plant species which is “critically imperiled in New York State because of extreme rarity (5 or fewer sites or very few remaining individuals) or extremely vulnerable to extirpation from New York State due to biological or human factors.” *Scutellaria integrifolia* is also found in the 2001 SLC/Holcim inventory, but with a common name of Woodland Skullcap. It should be verified by a State expert if these are distinct.

- G. **Marsh Horsetail (*Equisetum palustre*)** is listed by NYS DEC as a category S2 plant species, which is “imperiled in New York State because of rarity (6–20 sites or few remaining individuals) or highly vulnerable to extirpation from New York State due to biological or human factors.” It is also found in the 2001 SLC/Holcim inventory.
- H. **Purple Milkweed (*Asclepias purpurascens*)** is double-listed by NYS as both a category S2 and an S3 plant species, meaning that it is “imperiled in New York State because of rarity (6–20 sites or few remaining individuals) or highly vulnerable to extirpation from New York State due to biological or human factors” and “rare in New York State (usually 21–35 extant sites).” The State’s documentation explains: “The first rank indicates rarity based upon current documentation. The second rank indicates the probable rarity after all historical records and likely habitat have been checked.” It is also found in the 2001 SLC/Holcim inventory.
- I. **Southern Arrowwood (*Viburnum dentatum*, var. *venosum*)** is listed by NYS DEC as a category S2 plant species, which is “imperiled in New York State because of rarity (6–20 sites or few remaining individuals) or highly vulnerable to extirpation from New York State due to biological or human factors.” *Viburnum dentatum* is found in the 2001 SLC/Holcim inventory, named as “arrow wood.” The SLC/Holcim inventory does not specify a variety, so it should be verified by a State expert whether these are distinct.
- J. **Minute Duckweed (*Lemna perpusilla*)** is listed by NYS DEC as a category S1 plant species which is “critically imperiled in New York State because of extreme rarity (5 or fewer sites or very few remaining individuals) or extremely vulnerable to extirpation from New York State due to biological or human factors.” Duckweed (*Lemna minor*) is found in the 2001 SLC/Holcim inventory. Research of available literature indicates that these may be synonymous, but it should be verified by a State expert whether these are distinct.
- K. **Southeastern Bracken (*Pteridium aquilinum* var. *pseudocaudatum*)** is listed by NYS DEC as a category SH plant species, indicating “no existing sites known in New York State in the last 20-30 years but it may be rediscovered.” Bracken Fern (*Pteridium aquilinum*) is found in the 2001 SLC/Holcim inventory, with no variant specified. It should be verified by a State expert whether these are distinct.
- L. **Swamp Buttercup (*Ranunculus hispidus* var. *nitidus*)** is listed by NYS DEC as a category S1 plant species, which is “critically imperiled in New York State because of extreme rarity (5 or fewer sites or very few remaining individuals) or extremely vulnerable to extirpation from New York State due to biological or human factors.” Hispid Buttercup (*Ranunculus hispidus*) is found in the 2001 SLC/Holcim inventory, without a variant specified. It should be verified by a State expert whether these are distinct.



- M. **Smooth Bur-Marigold (*Bidens laevis*)** is listed as a category S2 plant species, which is “imperiled in New York State because of rarity (6–20 sites or few remaining individuals) or highly vulnerable to extirpation from New York State due to biological or human factors.” *Bidens laevis* is also found in the 2001 SLC/Holcim inventory, though the common name is given as Showy Bur Marigold. It should be verified by a State expert whether these are distinct.
- N. **Nodding Wild Onion (*Allium cernuum var. cernuum*)** is listed by NYS DEC as a category S2 plant species which is “imperiled in New York State because of rarity (6–20 sites or few remaining individuals) or highly vulnerable to extirpation from New York State due to biological or human factors.” *Allium cernuum* is found in the 2001 SLC/Holcim inventory, though with no variant indicated, with the common name given as Wild Garlic. It should be verified by a State expert whether these are distinct.
- O. **Burdick’s Wild Leek (*Allium tricoccum var. burdickii*)** is listed by NYS DEC as a category SH plant species, indicating “no existing sites known in New York State in the last 20-30 years but it may be rediscovered.” *Allium tricoccum* is found in the 2001 SLC/Holcim inventory with no variant indicated, and with the common name given as Wild Leek. It should be verified by a State expert whether these are distinct.
- P. **Green Spleenwort (*Asplenium trichomanes-ramosum*)** is listed by NYS DEC as a category S1 plant species which is “critically imperiled in New York State because of extreme rarity (5 or fewer sites or very few remaining individuals) or extremely vulnerable to extirpation from New York State due to biological or human factors.” *Asplenium trichomanes* is found in the 2001 SLC/Holcim inventory with the common name given as Maidenhair Spleenwort. It should be verified by a State expert whether these are distinct.
- Q. **Michaux’s Blue-eyed-grass (*Sisyrinchium mucronatum*)** is listed by NYS DEC as a category S1 plant species which is “critically imperiled in New York State because of extreme rarity (5 or fewer sites or very few remaining individuals) or extremely vulnerable to extirpation from New York State due to biological or human factors.” *Sisyrinchium atlanticum* is found in the 2001 SLC/Holcim inventory with the common name given as Eastern Blue-eyed Grass. A brief review of available literature indicates that these may be synonymous, but it should be verified by a State expert whether these are distinct.

II. EVIDENCE FROM PRIOR DEC RULINGS

The December 2002 rulings of DEC Administrative Law Judges (ALJs) Helene G. Goldberger and Maria Villa (regarding party status and issues related to the St. Lawrence Cement Greenport Proposal, which would have impacted mapped wetlands located in Hudson’s South Bay, The Town of Greenport, *et al.*) contains a number of valuable references to important species of concern in this area. These rulings acknowledged the presence of the following in the South Bay area:

- A. **Yellow-Spotted Turtle:** “A crushed shell of a yellow-spotted turtle was discovered in June 1999 along Route 9G.”
- B. **Swamp Agrimony:** “In the fall of 2000, Dr. Kiviat toured the area with Malcolm Pirnie, SLC’s consultant. At that time, Dr. Kiviat observed a species (swamp agrimony [*Agrimonia parviflora*]) listed on the State’s Natural Heritage Program Watch List). ... With respect to the swamp agrimony, SLC states that it was found during a field investigation but that due to an oversight, the plant was not included the DEIS.”
- C. **Red-Shouldered Hawk, Osprey:** “Surveys previously done revealed that two species of birds that are listed as of special concern—the red-shouldered hawk and the osprey—were observed in the spring and summer of 1989.” *Note:* This species is also found in the overlapping State and SLC/Holcim lists detailed in the previous section of these comments.

These statements by the ALJs dovetail with the inventory analysis presented in Section I. of these comments, as well as other evidence below. Each species referenced above should be included in the State’s narratives, analysis and scoring for the upgraded South Bay designation now under consideration.

III. TERRESTRIAL ECOLOGY ANALYSIS FROM 2001

As noted above, in 2001 the St. Lawrence Cement company filed an extensive Draft Environmental Impact Statement (DEIS) for their proposed “Greenport Project,” which was rejected in 2005 by the Secretary of State as inconsistent with the State’s Coastal Management Policies (CMP). At that time, St. Lawrence Cement was a division of Holcim US; today it is fully subsumed into its parent company.

Though experts and intervenor groups challenged the SLC DEIS as incomplete,* the document nevertheless contains numerous overt or tacit acknowledgements of conditions, species and habitats in the South Bay area which are highly pertinent to the current review of the draft designation. For example, in DEIS Chapter 12 (entitled “Terrestrial Ecology”), the company stated the following:

- A. **Disturbance to Emergent Wetland:** “The large areas of emergent wetland located on the western portion of the SLC property examined during the field surveys are part of the NYSDEC-regulated wetland HS-2 in the South Bay area. [...] This naturally occurring tidal estuarine wetland has been disturbed and impounded in the past from the construction of railroads and highways and by other human activity.”

* Groups and intervenors addressing the habitat and wetlands issues included, among others, Riverkeeper and Friends of Hudson (FoH), which this commenter directed at the time. A contemporaneous legal brief by Jeffrey S. Baker, then-counsel to FoH, noted “the failure of DEIS to list numerous plants and animal species that Mr. Kiviat knows are on the site and likely to be impacted by the project. Mr. Kiviat knows these species are present because he toured the site in the Fall of 2000, with members of Malcolm Pirnie.”

- B. Abundant Waterfowl and Other Birds in HS-2:** “West of NYS Route 9G, the inactive railroad bed is bordered on both sides for approximately 1,750 feet by NYS-DEC wetland HS-2. In these areas, the most abundant bird is the red-winged blackbird. Waterfowl species observed regularly in the HS-2 wetland were the mallard (*Anas platyrhynchos*), green-winged teal (*Anas carolinensis*), black duck (*Anas rubripes*), green-backed heron (*Butorides virescens*), great blue heron (*Ardea herodias*), and belted kingfisher (*Megaceryle alcyon*). Swamp sparrows (*Melospiza georgiana*), common yellowthroats, willow flycatchers (*Empidonax traillii*), and yellow warblers were also common along the wetland edges. [...] Many of the birds utilize the lands adjacent to the dismantled railroad bed for feeding, nesting, and cover. [...] In the area associated with the existing inactive railroad bed, avian species, such as the song sparrow (*Melospiza melodia*), gray catbird (*Dumetella carolinensis*), yellow warbler, red-winged blackbird (*Agelaius phoeniceus*), and American robin were the most common species observed during field surveys. Forest species that were also common along the existing railroad bed were the blackcapped chickadee (*Parus atricapillus*), tufted titmouse (*Parus bicolor*), wood thrush (*Hylocichla mustelina*), and rose-breasted grosbeak (*Pheucticus ludovicianus*).”
- C. Red-tailed Hawk:** “A red-tailed hawk (*Buteo jamaicensis*) was also observed flying over the dock location.”
- D. Herptiles, esp. Yellow-Spotted Turtle:** “The perimeter of HS-2 on the Greenport facility was field surveyed to identify potential habitat for herptiles with special attention to habitat favorable for the yellow-spotted turtle (*Clemmys guttata*).” And: “A crushed carapace from a yellow spotted turtle was observed during the June 29, 1999 survey along NYS Route 9G adjacent to a section of HS-2. It is believed to have been killed by a motor vehicle. The species is therefore listed on the inventory based on the observation of the turtle carapace along NYS Route 9G in the vicinity of HS-2” *Note:* See also the comment above regarding the rulings of ALJs Goldberger and Villa, which acknowledged this turtle finding.” Furthermore: “Several areas identified during the document review and field survey could be potential spotted turtle habitat.”

These statements by SLC/Holcim further emphasize the abundance of the South Bay and its environs. These rich and sensitive habitats must not be further “disturbed and impounded” as in the past by “highways and by other human activity.” Since Holcim’s presence in the area is noted in the draft proposal, and since there have been attempts to mischaracterize a controversial new route through the wetlands as an existing road, it is worth noting in this context that Chapter 12 of that DEIS also repeatedly refers to:

- **Page 12-6:** “the dismantled/abandoned railroad bed”
- **Page 12-8:** “the demolished railroad bed”
- **Page 12-13:** “the existing inactive railroad bed” [2x]
- **Page 12-13:** “the inactive railroad bed”
- **Page 12-13:** “the dismantled railroad bed”
- **Page 12-15:** “the inactive railroad bed”
- **Page 12-16:** “the inactive railroad bed” [2x]

In any event, each species referenced above should be included in the State’s narratives, analysis and scoring for the upgraded South Bay designation now under consideration.

IV. DEC STAFF TESTIMONY FROM 2001

During the lengthy issues conference which began in July 2001 for the SLC (now Holcim) “Greenport Project,” a number of DEC staff members were questioned on the record by the Administrative Law Judges, Helene Goldberger and Maria Villa, and these respondents provided field information and other expert opinion the wetlands and biota of the South Bay area which now helps illuminates the current proposed designation.

These respondents included: Region IV Wildlife Biologist Maynard Vance; Division of Solid Waste engineer Richard Forgea, P.E.; and both Betsy Blair and Fishery Biologist Andy Kahnle of the Bureau of Marine Resources. An official transcript of the proceedings was made and circulated to intervenors by DEC. Portions of their testimony relevant to the current review are cited below:

- A. **Mr. Vance on Tidal Influence of the South Bay:** “With regard to the freshwater wetlands on site of the proposed St. Lawrence Cement construction site, there’s a large freshwater wetland, which is labeled HS-2, and is protected under Article 24 of the Environmental Conservation Law on site. A portion of this wetland is tidally influenced from the Hudson River, and a portion, what would be called upland freshwater wetland. The wetland is quite large, probably 100 acres or more.”
- B. **Mr. Vance on a Road Through HS-2:** “[Creating] a public road with fairly heavy, and could have fairly heavy use because it is going down to the Hudson and everybody wants to get down to the river, that can be a real problem for wildlife in that area, such things as running over turtles, frogs, amphibians in that area. We go from not being a problem, as far as I can see, to becoming a big problem.”
- C. **Mr. Vance on Peregrine Falcons and Bald Eagles:** “We have peregrine falcons nesting within three to four miles of those structures [on the SLC/Holcim site]. We have bald eagles nesting within ten miles, and we have ravens, which I believe were also mentioned, they are nesting in the county.”
- E. **Mr. Forgea on Improving Tidal Flow:** “The tidal flow improvements to South Bay, I again, would like to reiterate that there would have to be intensive wildlife and vegetation species research done on that area, along with the hydrologic research, and that would be part of the mitigation study and would probably drive the shape of that mitigation.”
- F. **Ms. Blair on Recreating a Tidal Wetland:** “[W]ithout wanting to hedge too much here I guess as plainly as I can say it is the concept seems like a good one of removing fill formerly placed in Hudson South Bay and recreating a tidal wetland. Whether or not that will succeed depends on the details. Whether or not that will be a good concept in the context of the larger fresh water wetland in Hudson South Bay, you know, again, remains to be seen depending on what hydrologic changes are made and what other modifications are made.”

- G. **Mr. Kahnle on Dredging:** “[D]redging would very likely lead to reduced diversity of habitat in front of the dock site and render the location less desirable as fish habitat.”
- H. **Mr. Kahnle on Available Studies:** “[A]s part of the general study we are getting information on general habitat use in the reach of the river that brackets the City of Hudson. Your Honor, the material that was provided today came from one or two sample days in the vicinity of the Hudson dock site. The study that sample was part of encompassed two years of sampling in the reach of river that brackets the dock site. And a summary of that data would give us a lot better idea of habitat use by black bass in that reach of the river. [...] The information that we provided today was a very small subset of the information that we have contracted to obtain. [...] As soon as we can get it together we would be happy to do that, to provide it to all parties. [...] A second study was done by the department in the early ’80s, again, looking at fish use of habitats in the upper estuary. That’s a public document that we can provide tomorrow to all parties. The third study was contracted by the department to provide information on fish use in SAV beds and it just supports, strongly supports, the comments made by Ms. Blair about the importance of SAVs in this reach of the river.” *Note:* This indicates that at least three State studies relevant to the South Bay were either complete or in process in 2001; these should be obtained and reviewed in the context of this new proposed designation.

These DEC staff comments speak directly to many of the considerations currently under review for the proposed designation—for example, the feasibility of a mitigation study, the species present in the South Bay area, and the destructiveness of any potential use of the abandoned railbed area as an active roadway.

V. WETLAND BUFFERS & THE STATE ECL

It is also worth noting that there has been some dispute at the local level about whether the so-called “causeway” (or, per above, more properly the “abandoned inactive railroad bed”) is part of the mapped South Bay wetlands. The relevant State Environmental Conservation Law Title 7 statute at §24-0701.2 states:

*“Activities subject to regulation shall include erecting any structures, roads [or] any form of pollution ... and any other activity which substantially impairs any of the several functions served by freshwater wetlands or the benefits derived therefrom ... **whether or not they occur upon the wetland itself**, if they impinge upon or otherwise substantially effect the wetlands and are located not more than 100 feet from the boundary of such wetland.”*

The contested area would be part of the 100-foot buffer zone which exists around all such wetlands. Indeed, such a route would be overlapped by 100-foot wetland buffers from two or three different directions, even if the most conservative reading of the maps were accepted. These are to be regulated and protected in the same manner as the mapped wetland itself. As such, any debate about whether a proposed route through the Bay would be part of the wetland should be moot, as a distinction without a difference.

VI. TESTIMONY OF DR. KIVIAT

During the DEC Issues Conference for the proposed “Greenport Project” which is referenced above, ALJs Goldberger and Villa also heard extensively from Dr. Kiviat of Hudsonia, Ltd., who is widely recognized as a foremost expert on wetlands and biota of the Hudson River Estuary. In addition to his own research and that commissioned by nonprofit organizations, his expertise has often been retained by the State itself.

Dr. Kiviat has recently filed a report, commissioned by Scenic Hudson, which is already in the possession of the City of Hudson and NYS DOS. (This likely will be resubmitted by other parties in the context of this new review; if not, it should be obtained, reviewed and incorporated into the review of this proposed designation.) But already in 2001, the official transcript of the 2001 Issues Conference contains important references to habitats and species worth noting in this new context. For example, Dr. Kiviat testified on July 23rd, 2001 regarding the following topics:

- A. **Plantain:** “The DEIS reported an unidentified plantain species in the genus *Plantago* collected on the site that could have been the rare heartleaf plantain, *Plantain cordata*. [...] Heartleaf plantain is a species that is very much of concern to the New York Natural Heritage Program in New York State along the Hudson River.”
- B. **Indicator Plants for Rare Species:** “On the east side of Route 9G, just south of the old dirt road, old railroad alignment, is something that was described in the EIS as a shrub swam[p ... T]he flora that were reported in the DEIS for this habitat are plants that are important reliable indicators of high quality calcareous wetlands where botanists go to look for very rare species. These indicator plants, for example, are shrubby cinquefoil, Bebb willow and red-osier dogwood, and I think taken together these tree plants strongly indicate that this is a habitat that should have been and should be studied in more detail because it’s likely to have something much more rare in it.”
- C. **Spotted Turtle Mortality:** “The DEIS reported that a spotted turtle was found dead on Route 9G. This is a special concern species in New York State. It is not extremely rare yet in New York, but it is very vulnerable to highway mortality, to fragmentation of its habitat and to alteration and loss of the kinds of wetlands that it depends on. There is quite a bit of suitable habitat for spotted turtle on this site.”
- D. **Red-shouldered Hawk:** “Red-shouldered hawk, also a Special Concern species, was reported in the DEIS with a conspicuous lack of information about the population and way that the red-shouldered hawk or hawks are using the site, and it might be affected by the facility’s development. It was stated in the DEIS that a red-shouldered hawk was ‘observed in flight over both the deciduous habitat and emergent wetland during spring migration.’ We don’t know what the date was. We don’t know what the bird was doing when it was observed. It’s impossible to judge whether this is a migrant or a resident breeding bird. This is an animal that is still quite rare and vulnerable in



the Hudson Valley, even though it was recently downgraded from Threatened to Special Concern.”

- E. **Phragmites, Wrens, Virginia Rail:** “It doesn’t make any sense to write these wetlands off as being Phragmites dominated wetlands without going into them and finding out what’s there. They could be supporting breeding populations of at least bittern and northern harrier, which is a Threatened species in New York State; and other rarer species which are not listed, such as the marsh wren and Virginia rail.”
- F. **Value of Studying South Bay:** “In connection with a project conducted for the DEC developing methods for evaluating the ecological function of Hudson River tidal marshes, we studied about 20 tidal marshes and we were interested in studying Hudson South Bay because it is an interesting example of a very highly altered tidal marsh, which would have been or could have been an important part of our study designed for that project.”
- G. **Pied-billed Grebe:** “The species list appended to the DEIS include pied-billed grebe, which is a Threatened species in New York State, and we have no information in the DEIS about where this animal was seen on the site or when or anything else. So there is certainly some question whether the pied-billed grebe was breeding on the site or perhaps using it during migration as a temporary or seasonal foraging area.”
- H. **Potential Use of the Abandoned Railbed as a Road:** “We would need to know what kinds of animals are along that road; what’s crossing the road; what times of the year; what times of the day; whether reptiles are using the road to bask on as a source of solar heat during the early morning or late afternoon, for example, at certain times of the year; whether animals are using that road and the areas along the road for other particular purposes.”
- I. **Rare Birds in Dock Area?** “There is a number of bird species that could be foraging in that [dock] area or nesting in the area including some rare birds. Those could be using the dock itself; they could be using the roofs of the existing structures, or other habitat on the site.”
- J. **South Bay Prime for a Mitigation Project:** “I will say that I think Hudson South Bay is a good place to consider for a mitigation project.”

Each of these observations speaks directly to the current review of the proposed South Bay designation, and serve to further validate the other evidence cited in these comments from NYS DEC staff, ALJs Goldberger and Villa, State rare species lists, and even the inadvertent admissions of SLC/Holcim itself.

Finally, it should also be noted that Dr. Kiviat was again an invited presenter during a South Bay symposium organized by Scenic Hudson on June 24th, 2010 in Hudson. At that event, Dr. Kiviat stated that he’d identified, among other things, the presence of the rare smoky shrew (*Sorex fumeus*) in the South Bay. The American Society of Mammalogists notes that the smoky shrew prefers damp, shaded areas, and lists

the smoky shrew as “rare” in New York State. Subsisting largely on earthworms, insects, snails and small rodents, these shrews are in turn hunted by weasels and otters (*mustelidae*) owls, and snakes. This points to the likely presence of still other species in the South Bay area. Dr. Kiviat’s presentation was summarized thus by former 1st Ward Alderman Carole Osterink on her website:

“Next to speak was Erik Kiviat of Hudsonia, Ltd., who noted that parts of the South Bay are very similar to the Meadowlands in New Jersey. He described the physical characteristics of the South Bay and identified some of the species of fauna that have been sighted there, including the rare smoky shrew. He suggested three studies were needed to help understand the South Bay: a moss survey, a bird survey, and a fish survey. Kiviat also recognized the ‘causeway’ as one of the stressors in the South Bay but said that, in thinking about the causeway, it was important to consider the way flora and fauna are using it now: plants grow on it; animals travel along it.”

“[Kiviat] also mentioned a big dump in the South Bay—between two and four acres—which he said is probably an old municipal dump that was never covered. The presence of melted glass suggests that the dump had been burned repeatedly. He urged that this area too needs to be understood before moving forward.” *Reference:* [HTTP://WWW.GOSSIPSOFRIVERTOWN.BLOGSPOT.COM](http://www.gossipsofrivertown.blogspot.com)

In closing, thank you again for consideration of these comments, and please do not hesitate to contact me if there are you have any questions or source material requests.



Left: The still-flowing waters of Hudson’s South Bay depicted in the 19th Century, shortly after the introduction of the north-south rail line.

Note: The several wildlife and plant images contained in these comments are for illustrational purposes only.



APPENDIX D
TERRESTRIAL AND WILDLIFE RESOURCES

APPENDIX D

Table D-1 Plant Species Inventory of St. Lawrence Cement Greenport Facility	
Latin Name	Common Name
Trees	
<i>Acer negundo</i>	Box Elder
<i>Acer nigrum</i>	Black Maple
<i>Acer rubrum</i>	Red Maple
<i>Acer saccharinum</i>	Sliver Maple
<i>Acer saccharum</i>	Sugar Maple
<i>Ailanthus altissima</i>	Tree of Heaven
<i>Betula alleghaniensis</i>	Yellow Birch
<i>Betula lenta</i>	Black Birch
<i>Betula lutea</i>	Yellow Birch
<i>Betula papyrifera</i>	Paper Birch
<i>Betula populifolia</i>	Gray Birch
<i>Carya cordiformis</i>	Bitternut,
<i>Carya glabra</i>	Pignut
<i>Carya ovata</i>	Shagbark Hickory
<i>Carya tomentosa</i>	Mockernut
<i>Catalpa bignonioides</i>	Common Catalpa
<i>Celtis occidentalis</i>	Hackberry
<i>Fagus grandifolia</i>	American Beech
<i>Fraxinus americana</i>	White Ash
<i>Fraxinus pennsylvanica</i>	Green Ash
<i>Gleditsia triacanthos</i>	Honeylocust
<i>Juglans cinerea</i>	White Walnut
<i>Juglans nigra</i>	Black Walnut
<i>Juniperus virginiana</i>	Red Cedar
<i>Liriodendron tulipifera</i>	Tulip Tree
<i>Malus pumila</i>	Wild Apple
<i>Morus alba</i>	White Mulberry
<i>Morus rubra</i>	Red Mulberry
<i>Ostrya virginiana</i>	Hophornbeam
<i>Picea abies</i>	Norway Spruce
<i>Pinus strobus</i>	White Pine
<i>Platanus occidentalis</i>	Sycamore
<i>Populus deltoides</i>	Eastern Cottonwood
<i>Populus grandidentata</i>	Bigtooth Aspen
<i>Populus tremuloides</i>	Trembling Aspen
<i>Prunus serotina</i>	Wild Black Cherry
<i>Prunus virginiana</i>	Chokecherry
<i>Pyrus communis</i>	Wild Pear
<i>Quercus alba</i>	Swamp White Oak
<i>Quercus bicolor</i>	Scarlet Oak
<i>Quercus prinus</i>	Chestnut Oak
<i>Quercus rubra</i>	Northern Red Oak
<i>Quercus velutina</i>	Black Oak
<i>Robinia pseudo-acacia</i>	Black Locust
<i>Salix alba</i>	White Willow
<i>Sassafras albidum</i>	Sassafras
<i>Sorbus acuparia</i>	European Mountain Ash
<i>Thuja occidentalis</i>	Northern White Cedar
<i>Tilia americana</i>	Basswood
<i>Tsuga canadensis</i>	Eastern Hemlock
<i>Ulmus americana</i>	American Elm
<i>Ulmus rubra</i>	Slippery Elm

Table D-1 (continued)	
Plant Species Inventory of St. Lawrence Cement Greenport Facility	
Shrubs	
<i>Alnus rugosa</i>	Speckled Alder
<i>Amelanchier canadensis</i>	Shadbush
<i>Berberis thunbergii</i>	Japanese Barberry
<i>Berberis vulgare</i>	Common Barberry
<i>Carpinus caroliniana</i>	Blue Beech
<i>Cercis canadensis</i>	Redbud
<i>Clethra alnifolia</i>	Sweet Pepperbush
<i>Cornus alternifolia</i>	Alternate-leaved Dogwood
<i>Cornus amomum</i>	Silky Dogwood
<i>Cornus florida</i>	Flowering Dogwood
<i>Cornus foemina (C. racemosa)</i>	Gray Dogwood
<i>Cornus sericea (C. stolonifera)</i>	Red Osier Dogwood
<i>Crataegus Crus galli.</i>	Cockspur Hawthorn
<i>Euonymus alatus</i>	Burning Bush
<i>Gaylussacia baccata</i>	Huckleberry
<i>Hamamelis virginiana</i>	Witch Hazel
<i>Ilex verticillata</i>	Winterberry
<i>Kalmia latifolia</i>	Mountain Laurel
<i>Ligustrum vulgare</i>	Privet
<i>Lindera benzoin</i>	Spice Bush
<i>Lonicera tatarica</i>	Tartarian Honeysuckle
<i>Malus coronaria</i>	Wild Crabapple
<i>Malus pumila</i>	Common Apple
<i>Myrica pensylvanica</i>	Bayberry
<i>Ostrya virginiana</i>	Ironwood
<i>Physocarpus opulifolius</i>	Ninebark
<i>Potentilla fruticosa</i>	Shrubby Cinquefoil
<i>Pyrus communis</i>	Pear
<i>Ribes americanum</i>	Wild Black Currant
<i>Rhododendron roseum</i>	Pink Azalea
<i>Rhododendron viscosum</i>	Swamp Azalea
<i>Rhamnus cathartica</i>	Common Buckthorn
<i>Rhamnus frangula</i>	European Buckthorn
<i>Rhus glabra</i>	Smooth Sumac
<i>Rhus typhina</i>	Staghorn Sumac
<i>Rosa blanda</i>	Meadow Rose
<i>Rosa multiflora</i>	Multiflora Rose
<i>Rubus allegheniensis</i>	Common Blackberry
<i>Rubus flagellaris</i>	American Dewberry
<i>Rubus occidentalis</i>	Black Raspberry
<i>Rubus odoratus</i>	Purple Flowering Raspberry
<i>Rubus phoenicolasius</i>	Wineberry
<i>Salix bebbiana</i>	Beaked Willow
<i>Salix caprea</i>	Goat Willow
<i>Salix discolor</i>	Pussy Willow
<i>Sambucus canadensis</i>	American Elderberry
<i>Spiraea tomentosa</i>	Steeplebush
<i>Syringa vulgaris</i>	Lilac
<i>Staphylea trifolia</i>	Bladdernut
<i>Vaccinium corymbosum</i>	Highbush Blueberry
<i>Viburnum acerifolium</i>	Maple-leaf Viburnum
<i>Viburnum dentatum</i>	Arrow Wood
<i>Viburnum lentago</i>	Northern Wild Raisin
<i>Zanthoxylum americanum</i>	Prickly Ash
Vines	

Table D-1 (continued)	
Plant Species Inventory of St. Lawrence Cement Greenport Facility	
<i>Amphicarpa bracteata</i>	Hog-peanut
<i>Apios americana</i>	Groundnut
<i>Celastrus orbiculatus</i>	Oriental Bittersweet
<i>Clematis occidentalis</i>	Purple Clematis
<i>Clematis virginiana</i>	Virgin's Bower
<i>Convolvulus arvensis</i>	Field Bindweed
<i>Lonicera japonica</i>	Japanese Honeysuckle
<i>Parthenocissus quinquefolia</i>	Virginia Creeper
<i>Polygonum convolvulus</i>	Corn Bindweed-
<i>Smilax rotundifolia</i>	Catbrier; Greenbrier
<i>Solanum dulcamara</i>	Twining Nightshade
<i>Toxicodendron radicans</i>	Poison Ivy
<i>Vitis aestivalis</i>	Summer Grape
<i>Vitis labrusca</i>	Fox Grape
<i>Vitis riparia</i>	Riverbank Grape
Herbs-Forbs	
<i>Abutilon theophrasti</i>	Indian Mallow
<i>Acalypha rhomboidea</i>	Mercury
<i>Achillea millefolium</i>	Common Yarrow
<i>Actaea pachypoda</i>	White Baneberry
<i>Alliaria petiolata</i>	Garlic Mustard
<i>Allium cernuum</i>	Wild Garlic
<i>Allium tricoccum</i>	Wild Leek
<i>Allium vineale</i>	Field Garlic
<i>Amaranthus retroflexus</i>	Pigweed
<i>Ambrosia artemisiifolia</i>	Ragweed
<i>Anchusa arvensis</i>	Buglos
<i>Anomone cylindrica</i>	Thimbleweed
<i>Anemonella thalictroides</i>	Rue Anemone
<i>Antennaria plantaginifolia</i>	Pussytoes
<i>Anthemis cotula</i>	Mayweed
<i>Apocynum androsaemifolium</i>	Spreading Dogbane
<i>Apocynum cannabinum</i>	Dogbane
<i>Aquilegia canadensis</i>	Columbine
<i>Arabidopsis thaliana</i>	Rock Cress
<i>Arabis canadensis</i>	Sicklepod
<i>Arabis laevigata</i>	Smooth Rock-cress
<i>Aralia nudicaulis</i>	Wild sarsaparilla
<i>Arctium minus</i>	Common Burdock
<i>Arisaema triphyllum</i>	Jack-in-the-pulpit
<i>Artemisia biennis</i>	Sweet-Wormwood
<i>Artemisia vulgaris</i>	Felon-herb
<i>Asclepias incarnata</i>	Swamp Milkweed
<i>Asclepias purpurascens</i>	Purple Milkweed
<i>Asclepias syriaca</i>	Common Milkweed
<i>Asparagus officinalis</i>	Asparagus
<i>Aster acuminatus</i>	Wood Aster
<i>Aster cordifolius</i>	Common Blue Heart-leaved Aster
<i>Aster divaricatus</i>	Common White Heart-leaved Aster
<i>Aster ericoides</i>	Heather-leaved Aster
<i>Aster macrophyllus</i>	Large-leaved Aster
<i>Aster lanceolatus</i>	Tall White Aster
<i>Aster novi-angliae</i>	New England Aster
<i>Barbarea cernua</i>	Winter Cress
<i>Barbarea vulgaris</i>	Cress, Yellow Rocket
<i>Bidens discoidea</i>	Bur Marigold
<i>Bidens frondosa</i>	Beggar-ticks

Table D-1 (continued) Plant Species Inventory of St. Lawrence Cement Greenport Facility	
<i>Bidens laevis</i>	Showy Bur Marigold
<i>Boehmeria cylindrica</i>	False-nettle
<i>Capsella bursa-pastoris</i>	Shepherd's-purse
<i>Cardamine concatenata</i>	Cut-leaf Toothwort
<i>Cardamine diphylla</i>	Two-leaf Toothwort
<i>Centaurea maculosa</i>	Spotted Knapweed
<i>Centaurea nigra</i>	Black Knapweed
<i>Cerastium vulgatum</i>	Common Chickweed
<i>Cichorium intybus</i>	Chicory
<i>Chelidonium majus</i>	Celandine
<i>Chenopodium album</i>	Lamb's-quarters
<i>Chimaphila maculata</i>	Spotted Wintergreen
<i>Chrysanthemum leucanthemum</i>	Ox-eye Daisy
<i>Chrysosplenium americanum</i>	Golden Saxifrage
<i>Cichorium intybus</i>	Chicory
<i>Cicuta maculata</i>	Water Hemlock
<i>Cimucifuga racemosa</i>	Bugbane
<i>Cirsium arvense</i>	Canada Thistle
<i>Cirsium vulgare</i>	Bull Thistle
<i>Cyperus strigosus</i>	False Nutsedge
<i>Daucus carota</i>	Queen-Anne's-lace
<i>Dentaria diphylla</i>	Toothwort
<i>Desmodium paniculatum</i>	Tick Trefoil
<i>Dianthus armeria</i>	Deptford Pink
<i>Dipsacus sylvestris</i>	Common Teasel
<i>Echium vulgare</i>	Viper's buglos
<i>Erigeron annuus</i>	Annual Fleaban
<i>Erigeron strigosus</i>	Daisy Fleabane
<i>Erythronium americanum</i>	Trout Lily
<i>Eupatorium maculatum (Eupatoriadelphus maculatus)</i>	Spotted Joe-Pyeweed
<i>Eupatorium rugosum</i>	White Snakeroot
<i>Euthamia graminifolia</i>	Common Flat-topped Goldenrod
<i>Fragaria virginiana</i>	Common Strawberry
<i>Galium aparine</i>	Bedstraw, Cleavers
<i>Galium boreale</i>	Northern Bedstraw
<i>Geranium maculatum</i>	Wild Geranium
<i>Geranium robertianum</i>	Robert's Geranium
<i>Geum canadense</i>	White Avens
<i>Glecoma hederacea</i>	Ground-ivy
<i>Helianthus strumosus (H. divaricatus)</i>	Woodland Sunflower
<i>Hemerocallis fulva</i>	Day Lily
<i>Hesperis matronalis</i>	Dame's Rocket
<i>Hieracium caespitosum</i>	Field Hawkweed
<i>Hieracium floribundum</i>	Hawkweed
<i>Hydrocotyle americana</i>	Water Purslane
<i>Hypericum perforatum</i>	Common St. John's-wort
<i>Impatiens capensis</i>	Wild Impatiens
<i>Ipomea lacunosa</i>	Small White Morning Glory
<i>Ipomea pupurea</i>	Common Morning Glory
<i>Iris pseudoacorus</i>	Yellow Iris
<i>Iris versicolor</i>	Blue Flag Iris
<i>Lactuca canadensis</i>	Wild Lettuce
<i>Lactuca serriola</i>	Prickly Lettuce
<i>Laportea canadensis</i>	Wood-nettle
<i>Lemna minor</i>	Duckweed
<i>Leontodon autumnalis</i>	Hawkbit
<i>Leonurus cardiaca</i>	Motherwort

Table D-1 (continued)	
Plant Species Inventory of St. Lawrence Cement Greenport Facility	
<i>Lepidium virginicum</i>	Peppergrass
<i>Lespedeza capitata</i>	Round-headed Bushclover
<i>Linaria vulgaris</i>	Butter-and-Eggs
<i>Lobelia inflata</i>	Indian Tobacco
<i>Lobelia siphilitica</i>	Great Lobelia
<i>Lotus corniculata</i>	Birds-foot Trefoil
<i>Lychnis alba</i>	White Campion
<i>Lycopus virginiana</i>	Water-horehound
<i>Lysimachia quadrifolia</i>	Whorled Loosestrife
<i>Lythrum salicaria</i>	Purple Loosestrife
<i>Maianthemum canadense</i>	Wild-lily-of-the-valley
<i>Medicago lupulina</i>	Black Medick
<i>Matricaria discoidea</i>	Pineapple-weed
<i>Medicago sativa</i>	Alfalfa
<i>Melampyrum lineare</i>	Cow-wheat
<i>Melilotus alba</i>	White Sweet Clover
<i>Mentha aquatica</i>	Water Mint
<i>Mentha soicata</i>	Spearint
<i>Mimulus ringens</i>	Monkey-flower
<i>Mitella diphylla</i>	Miterwort
<i>Nepeta cataria</i>	Catnip
<i>Oenothera biennis</i>	Evening Primrose
<i>Origanum vulgare</i>	Wild Marjoram
<i>Oxalis stricta</i>	Wood Sorrel
<i>Oxalis vulgare</i>	Yellow Wood Sorrel
<i>Peltandra virginica</i>	Arrow Arum
<i>Phryma leptostachya</i>	Lopseed
<i>Phytolacca americana</i>	American Pokeweed
<i>Pilea pumila</i>	Clearweed
<i>Plantago spp.</i>	Plantain
<i>Plantago lanceolata</i>	English Plantain
<i>Plantago major</i>	Common Plantain
<i>Podophyllum peltatum</i>	Mayapple
<i>Polygonatum biflorum</i>	Solomon's Seal
<i>Polygonatum pubescens</i>	Small Solomon's Seal
<i>Polygonum coccineum</i>	Swamp Smartweed
<i>Polygonum convolvulus</i>	Black bindweed
<i>Polygonum cuspidatum</i>	Japanese Knotweed
<i>Polygonum pennsylvanicum</i>	Pennsylvania Smartweed
<i>Polygonum sagittatum</i>	Arrow-leaf Tearthumb
<i>Polygonum virginiana</i>	Lady s-thumb, Smartweed
<i>Pontederia cordata</i>	Pickerelweed
<i>Potentilla recta</i>	Rough-fruited Cinquefoil
<i>Potentilla simplex</i>	Rough Cinquefoil
<i>Portulaca oleracea</i>	Purslane
<i>Prunella vulgaris</i>	Self-Heal
<i>Pycnanthemum tenuifolium</i>	Mountain-mint
<i>Ranunculus acris</i>	Common Buttercup
<i>Ranunculus hispidus</i>	Hispid Buttercup
<i>Rorippa palustris</i>	Yellow Cress
<i>Rudbeckia hirta</i>	Black-eyed Susan
<i>Rumex crispus</i>	Curly Dock
<i>Sanquinaria canadensis</i>	Bloodroot
<i>Sagittaria latifolia</i>	Arrowhead
<i>Saponaria officinalis</i>	Soapwort
<i>Saxifraga virginiana</i>	Early Saxifrage
<i>Scutellaria integrifolia</i>	Woodland Skullcap

Table D-1 (continued)	
Plant Species Inventory of St. Lawrence Cement Greenport Facility	
<i>Scutellaria lateriflora</i>	Bottomland Skullcap
<i>Senecio vulgaris</i>	Groundsel
<i>Silene cucubalis</i>	Bladder Champion
<i>Sium suave</i>	Water-parsnip
<i>Smilacina racemosa</i>	Tall False Solomons-seal
<i>Solanum carolinense</i>	Horse-nettle
<i>Solanum dulcamara</i>	Bittersweet Nightshade
<i>Solanum ptycanthum</i>	Black Nightshade
<i>Solidago bicolor</i>	White Goldenrod
<i>Solidago caesia</i>	Blue-stemmed Goldenrod
<i>Solidago canadensis (S. altissima)</i>	Canada Goldenrod
<i>Solidago flexicaulis</i>	Zig-zag Goldenrod
<i>Solidago gigantea</i>	Late Goldenrod
<i>Solidago hispida</i>	Hispid Goldenrod
<i>Solidago juncea</i>	Early Goldenrod
<i>Solidago patula</i>	Rough-leaved Goldenrod
<i>Solidago nemoralis</i>	Gray Goldenrod
<i>Solidago rugosa</i>	Wrinkle-leaved Goldenrod
<i>Solidago ulmifolia</i>	Elm-leaved Goldenrod
<i>Sonchus ?arvensis</i>	Sow-thistle
<i>Stellaria media</i>	Common Chickweed
<i>Symplocarpus foetidus</i>	Skunk Cabbage
<i>Taraxacum officinale</i>	Common Dandelion
<i>Thalictrum dioicum</i>	Early Meadow Rue
<i>Thalictrum polygamum</i>	Tall Meadow Rue
<i>Thalaspis arvense</i>	Field Pennycress
<i>Trifolium aureum</i>	Palmate Hop-Clover
<i>Trifolium hybridum</i>	Alsike Clover
<i>Trifolium pratense</i>	Red Clover
<i>Trifolium repens</i>	White Clover
<i>Trillium erectum</i>	Purple Trillium
<i>Tussilago farfara</i>	Sweet Coltsfoot
<i>Uvularia grandiflora</i>	Bellwort
<i>Uvularia sessilifolia</i>	Wild Oats, Bellwort
<i>Verbascum blattaria</i>	Moth Mullein
<i>Verbascum thapsus</i>	Common Mullein
<i>Verbena hastata</i>	Blue Vervain
<i>Verbena urticifolia</i>	White Vervain
<i>Veronica americana</i>	American Speedwell
<i>Veronica arvensis</i>	Corn Speedwell
<i>Veronica officinalis</i>	Common Speedwell
<i>Vicia cracca</i>	Bird Vetch
<i>Viola blanda</i>	Sweet White Violet
<i>Viola conspersa</i>	American Dog-Violet
<i>Viola cucullata</i>	Blue Marsh Violet
<i>Viola pubescens</i>	Downy Yellow Violet
<i>Viola sororia</i>	Common Violet
Herbs—Graminoids	
<i>Agrostis gigantea</i>	Redtop, Black Bent
<i>Agrostis stolonifera</i>	Bentgrass
<i>Alopecurus pratensis</i>	Meadow Foxtail
<i>Anthoxanthum odoratum</i>	Sweet Vernalgrass
<i>Arrhenatherum elatius</i>	Tall Oatgrass
<i>Bromus inermis</i>	Smooth Brome
<i>Carex appalachica</i>	Appalachian Sedge
<i>Carex crinita</i>	Fringed Sedge
<i>Carex flava</i>	Yellow Sedge

Table D-1 (continued)	
Plant Species Inventory of St. Lawrence Cement Greenport Facility	
<i>Carex pensylvanica</i>	Pennsylvania Sedge
<i>Carex stricta</i>	Tussock Sedge
<i>Carex vulpinoidea</i>	Fox Sedge
<i>Cyperus esculentus</i>	Nut Sedge
<i>Cyperus strigosus</i>	Flat Sedge
<i>Dactylis glomerata</i>	Orchard Grass
<i>Digitaria sanguinalis</i>	Crabgrass
<i>Danthonia spicata</i>	Poverty Oatgrass
<i>Digitaria ischameum</i>	Crab Grass
<i>Echinochloa crus-galli</i>	Barnyard Grass
<i>Eleocharis palustris</i>	Spikerush
<i>Elusine indica</i>	Goosegrass
<i>Elymus virginiana</i>	Virginia Wild Rye
<i>Elytrigia repens</i>	Quackgrass
<i>Eragrostis pectinacea</i>	Lovegrass
<i>Eragrostis spectabilis</i>	Purple Lovegrass
<i>Festuca pratense</i>	Meadow Fescue, English Bluegrass
<i>Festuca rubra</i>	Red Fescue
<i>Glyceria striata</i>	Fowl Mannagrass
<i>Iris pseudacorus</i>	Yellow Flag Iris
<i>Iris versicolor</i>	Blue Flag Iris
<i>Juncus canadensis</i>	Canadian Rush
<i>Juncus effusus</i>	Common Rush
<i>Leersia oryzoides</i>	Wild Rice
<i>Lolium perenne</i>	English Ryegrass
<i>Microstegia vineum</i>	Eulalia Grass
<i>Panicum acuminatum</i>	Panic Grass
<i>Panicum capillare</i>	Witch-grass
<i>Panicum clandestinum</i>	Deer-tongue, Panic Grass
<i>Panicum latifolium</i>	Panic Grass
<i>Panicum miliaceum</i>	Broom-corn Millet, Proso
<i>Panicum philadelphicum</i>	Slender Annual Panic Grass
<i>Phalaris arundinacea</i>	Reed Canary Grass
<i>Phleum pratense</i>	Timothy
<i>Phragmites australis</i>	Common Reed
<i>Poa annua</i>	Annual Bluegrass
<i>Poa compressa</i>	Canada Bluegrass
<i>Poa palustris</i>	Fowl Bluegrass, Fowl Meadowgrass
<i>Poa pratensis</i>	Kentucky Bluegrass
<i>Schizachyrium scoparium</i>	Little Bluestem
<i>Scirpus americanum</i>	Three-Square
<i>Scirpus cyperinus</i>	Woolgrass
<i>Scirpus validus</i>	Soft-stemmed Bulrush
<i>Setaria faberi</i>	Giant Foxtail, Chinese Foxtail
<i>Setaria glauca</i>	Yellow Foxtail, Pigeongrass
<i>Sisyrinchium ?atlanticum</i>	Eastern Blue-eyed Grass
<i>Sparaganium americanum</i>	American Bulrush
<i>Trapa nutans</i>	Water Chesnut
<i>Typha angustifolia</i>	Narrow-Leaved Cattail
<i>Typha latifolia</i>	Common Cattail

Table D-1 (continued)	
Plant Species Inventory of St. Lawrence Cement Greenport Facility	
Ferns and Fern Allies	
<i>Adiantum pedatum</i>	Lady Fern
<i>Asplenium platyneuron</i>	Ebony Spleenwort
<i>Asplenium trichomanes</i>	Maidenhair Spleenwort
<i>Athyrium filix-femina</i>	Northern Lady-fern
<i>Camptosaurus rhizophyllus</i>	Walking Fern
<i>Dennstaedtia punctiloba</i>	Hayscented Fern
<i>Dryopteris marginalis</i>	Marginal Wood Fern
<i>Equisetum arvense</i>	Field Horsetail
<i>Equisetum palustre</i>	Marsh Hirsetail
<i>Equisetum pratense</i>	Meadow Horsetail
<i>Lycopodium obscurum</i>	Northern Tree Clubmoss
<i>Polystichum acrostichoides</i>	Christmas Fern
<i>Onoclea sensibilis</i>	Sensitive Fern
<i>Osmunda cinnamomea</i>	Cinnamon Fern
<i>Osmunda claytoniana</i>	Interrupted Fern
<i>Osmunda regalis</i>	Royal Fern
<i>Pellea atropupurea</i>	Purple Stemmed Cliffbrake
<i>Polypodium vulgare</i>	Common Polypody
<i>Polystichum acrostichoides</i>	Christmas Fern
<i>Pteridium aquilinum</i>	Bracken Fern
<i>Thelypteris noveboracensis</i>	New York Fern
<i>Thelypteris palustris (T. thelypteroides)</i>	Marsh Fern
<i>Woodwardia virginica</i>	Virginia Chain Fern

Table D-2 Wildlife Inventory of St. Lawrence Cement Greenport Facility	
Latin Name	Common Name
Avian Species	
<i>Actitis macularia</i>	Spotted sandpiper
<i>Agelaius phoeniceus</i>	Red-winged blackbird
<i>Aix sponsa</i>	Wood duck
<i>Anas carolinensis</i>	Green-winged teal
<i>Anas platyrhynchos</i>	Mallard
<i>Anas rubripes</i>	American black duck
<i>Archilochus colubris</i>	Ruby-throated hummingbird
<i>Ardea herodias</i>	Great blue heron
<i>Aythya marila</i>	Greater scaup
<i>Bombycilla cedrorum</i>	Cedar waxwing
<i>Bonasa umbellus</i>	Ruffed grouse
<i>Branta canadensis</i>	Canada goose
<i>Bubo virginianus</i>	Great horned owl
<i>Buteo jamaicensis</i>	Red-tailed hawk
<i>Buteo lineatus</i>	Red-shouldered hawk
<i>Butorides virescens</i>	Green-backed heron
<i>Carduelis tristis</i>	American goldfinch
<i>Cardinalis cardinalis</i>	Northern cardinal
<i>Carpodacus mexicanus</i>	House finch
<i>Cathartes aura</i>	Turkey vulture
<i>Centurus carolinus</i>	Red-bellied woodpecker
<i>Certhia familiaris</i>	Brown creeper
<i>Chaetura pelagica</i>	Chimney swift
<i>Charadrius vociferus</i>	Killdeer
<i>Chordeiles minor</i>	Common nighthawk
<i>Cistothorus palustris</i>	Marsh wren
<i>Colaptes auratus</i>	Northern flicker
<i>Columba livia</i>	Rock dove
<i>Corvus caurinus</i>	American crow
<i>Corvus ossifragus</i>	Fish crow
<i>Cyanocitta cristata</i>	Blue jay
<i>Dendrocopos pubescens</i>	Downy woodpecker
<i>Dendroica coronata</i>	Yellow-rumped warbler
<i>Dendroica discolor</i>	Prairie warbler
<i>Dendroica magnolia</i>	Magnolia warbler
<i>Dendroica pennsylvanica</i>	Chestnut-sided warbler
<i>Dendroica petechia</i>	Yellow warbler
<i>Dendroica pinus</i>	Pine warbler
<i>Dendroica striata</i>	Blackpoll warbler
<i>Dendroica virens</i>	Black-throated green warbler
<i>Drycopus pileatus</i>	Pileated woodpecker
<i>Dumetella carolinensis</i>	Gray catbird
<i>Empidonax traillii</i>	Willow flycatcher
<i>Falco sparverius</i>	American kestrel
<i>Geothlypis trichas</i>	Common yellowthroat
<i>Hylocichla fuscescens</i>	Veery
<i>Hylocichla mustelina</i>	Wood thrush
<i>Icterus galbula</i>	Northern oriole
<i>Iridoprocne bicolor</i>	Tree swallow
<i>Icteria virens</i>	Yellow-breasted chat
<i>Junco hyemalis</i>	Dark-eyed junco
<i>Larus argentatus</i>	Herring gull
<i>Larus delawarensis</i>	Ring-billed gull
<i>Megaceryle alcyon</i>	Belted kingfisher
<i>Meleagris gallapavo</i>	Wild turkey

Table D-2 (continued)	
Wildlife Inventory of St. Lawrence Cement Greenport Facility	
<i>Melospiza georgiana</i>	Swamp sparrow
<i>Melospiza melodia</i>	Song sparrow
<i>Mimus polyglottus</i>	Northern mockingbird
<i>Mniotilta varia</i>	Black-and-white warbler
<i>Molothrus ater</i>	Brown-headed cowbird
<i>Myiarchus crinitus</i>	Great crested flycatcher
<i>Pandion haliaetus</i>	Osprey
<i>Parus atricapillus</i>	Black-capped chickadee
<i>Parus bicolor</i>	Tufted titmouse
<i>Passer domesticus</i>	House sparrow
<i>Passerina cyanea</i>	Indigo bunting
<i>Phalacrocorax auritus</i>	Double-breasted cormorant
<i>Pheucticus ludovicianus</i>	Rose-breasted grosbeck
<i>Philohela minor</i>	American woodcock
<i>Pipilo erythrophthalmus</i>	Rufous-sided towhee
<i>Piranga olivacea</i>	Scarlet tanager
<i>Podilymbus podiceps</i>	Pied-billed grebe
<i>Poliophtila caerulea</i>	Blue-gray gnatcatcher
<i>Picoides pubescens</i>	Downy woodpecker
<i>Picoides villosus</i>	Hairy woodpecker
<i>Quiscalus quiscula</i>	Common grackle
<i>Regulus calendula</i>	Ruby-crowned kinglet
<i>Regulus satrapa</i>	Golden-crowned kinglet
<i>Richmonelena cardinalis</i>	Northern cardinal
<i>Riparia riparia</i>	Bank swallow
<i>Sayornis phoebe</i>	Eastern phoebe
<i>Seiurus aurocapillus</i>	Ovenbird
<i>Setophaga ruticilla</i>	American redstart
<i>Sitta carolinensis</i>	White-breasted nuthatch
<i>Spinus tristis</i>	American goldfinch
<i>Spizella passerina</i>	Chipping sparrow
<i>Stelgidopteryx ruficollis</i>	Northern rough-winged swallow
<i>Sturnus vulgaris</i>	European starling
<i>Thryothorus ludovicianus</i>	Carolina wren
<i>Toxostoma rufum</i>	Brown thrasher
<i>Troglodytes aedon</i>	House wren
<i>Turdus migratorius</i>	American robin
<i>Tyrannus tyrannus</i>	Eastern kingbird
<i>Vermivora pinus</i>	Blue-winged warbler
<i>Vermivora ruficapilla</i>	Nashville warbler
<i>Vireo gilvus</i>	Warbling vireo
<i>Vireo olivaceus</i>	Red-eyed vireo
<i>Vireo solitarius</i>	Solitary vireo
<i>Wilsonia canadensis</i>	Canada warbler
<i>Wilsonia citrina</i>	Hooded warbler
<i>Zenaidura macroura</i>	Mourning dove
<i>Zonotrichia albicollis</i>	White-throated sparrow
Mammal Species	
<i>Blarina brevicauda</i>	Short-tailed shrew
<i>Clethrionomys gapperi</i>	Southern red-backed vole
<i>Didelphis virginiana</i>	Virginia opossum
<i>Felis domesticus</i>	Domestic cat
<i>Marmota monax</i>	Woodchuck
<i>Mephitis mephitis</i>	Striped skunk
<i>Microtus pennsylvanicus</i>	Meadow vole
<i>Napaeozapus insignis</i>	Woodland jumping mouse
<i>Odocoileus virginianus</i>	White-tailed deer
<i>Ondatra zibethicus</i>	Muskrat
<i>Peromyscus leucopus</i>	White footed mouse

APPENDIX D

Table D-2 (continued)	
Wildlife Inventory of St. Lawrence Cement Greenport Facility	
<i>Procyon lotor</i>	Raccoon
<i>Sciurus carolinensis</i>	Gray squirrel
<i>Sorex cinereus</i>	Masked shrew
<i>Sylvilagus floridanus</i>	Eastern cottontail
<i>Tamias striatus</i>	Eastern chipmunk
<i>Tamiasciurus hudsonicus</i>	Red squirrel
<i>Zapus hudsonius</i>	Meadow jumping mouse
Amphibian Species	
<i>Bufo americanus</i>	Eastern American toad
<i>Hyla crucifer</i>	Northern spring peeper
<i>Hyla versicolor</i>	Gray treefrog
<i>Notophthalmus viridescens</i>	Red-spotted newt
<i>Plethodon cinereus</i>	Red-backed salamander
<i>Rana catesbeiana</i>	Bullfrog
<i>Rana clamitans melanota</i>	Green frog
<i>Rana palustris</i>	Pickerel frog
<i>Rana sylvatica</i>	Wood frog
Reptile Species	
<i>Chelydra serpentina</i>	Common snapping turtle
<i>Chrysemys picta marginata</i>	Midland painted turtle
<i>Thamnophis sauritus</i>	Eastern ribbon snake
<i>Thamnophis sirtalis</i>	Common garter snake